Syncro ASM

Analogue Addressable Marine Fire Control Panel

User Manual

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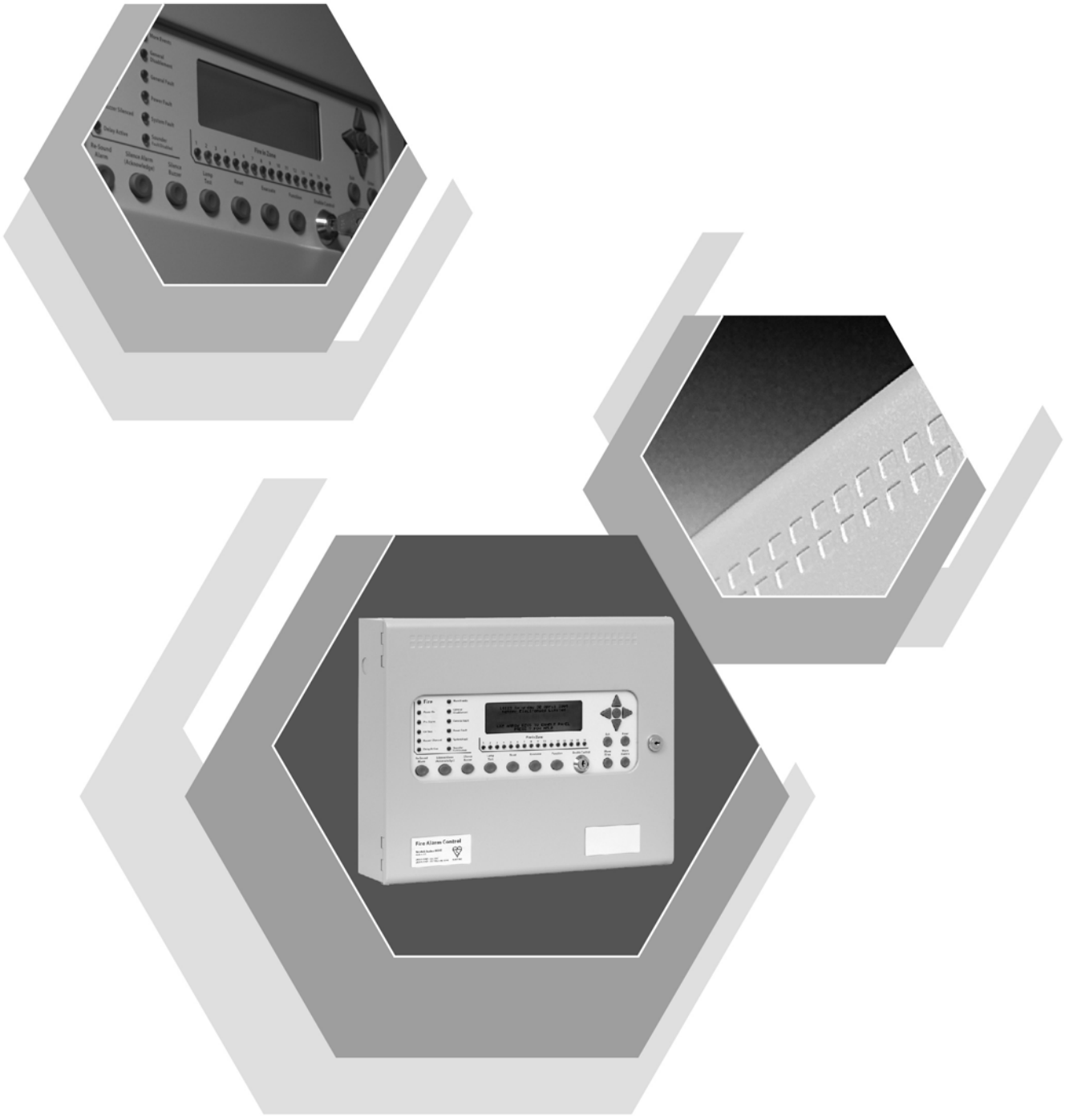

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1. Introduction

The **Syncro ASM** is a single or two loop analogue addressable fire detection and alarm control panel that conforms to the requirements of European Standards EN54-2:1997 and EN54-4:1997.

It is capable of covering a maximum of 16 zones (500 zones on a network) with 126 devices for Apollo protocol, and 127 devices per loop for Hochiki protocol.

Any number of devices can be allocated to any zone ensuring that any system configuration can be easily accommodated.

Each detection device is allocated a message of up to 40 characters (including spaces) to assist in the location of the devices.

The **Syncro ASM** control panel offers an extensive list of features and options for the control and monitoring of plant, equipment and sounders.

The range of compatible devices includes optical and ionisation smoke sensors, heat sensors, multi-sensors, switch monitors and relay or bell controllers. Interfaces to conventional detection systems can also be catered for using zone-monitoring devices.

2. Safety

This product should be installed, commissioned and maintained by trained service personnel in accordance with the following:

(i) Regulations for electrical equipment

(ii) Codes of practice

(iii) Statutory requirements

(iv) Any instructions specifically advised by the manufacturer

You are therefore requested to take such steps as are necessary to ensure that you make any appropriate information about this product available to anyone concerned with its use.

This equipment is designed to be operated from 230V 50Hz mains supplies and is of class 1 construction. As such it **must** be connected to a protective earthing conductor in the fixed wiring of the installation and a readily accessible double pole disconnect device should be incorporated in the fixed wiring.

Failure to ensure that all conductive accessible parts of this equipment are adequately bonded to the protective earth will render the equipment unsafe.

3. Panel Controls

3.1 Access Level 1

The front panel contains controls for operating the panel.

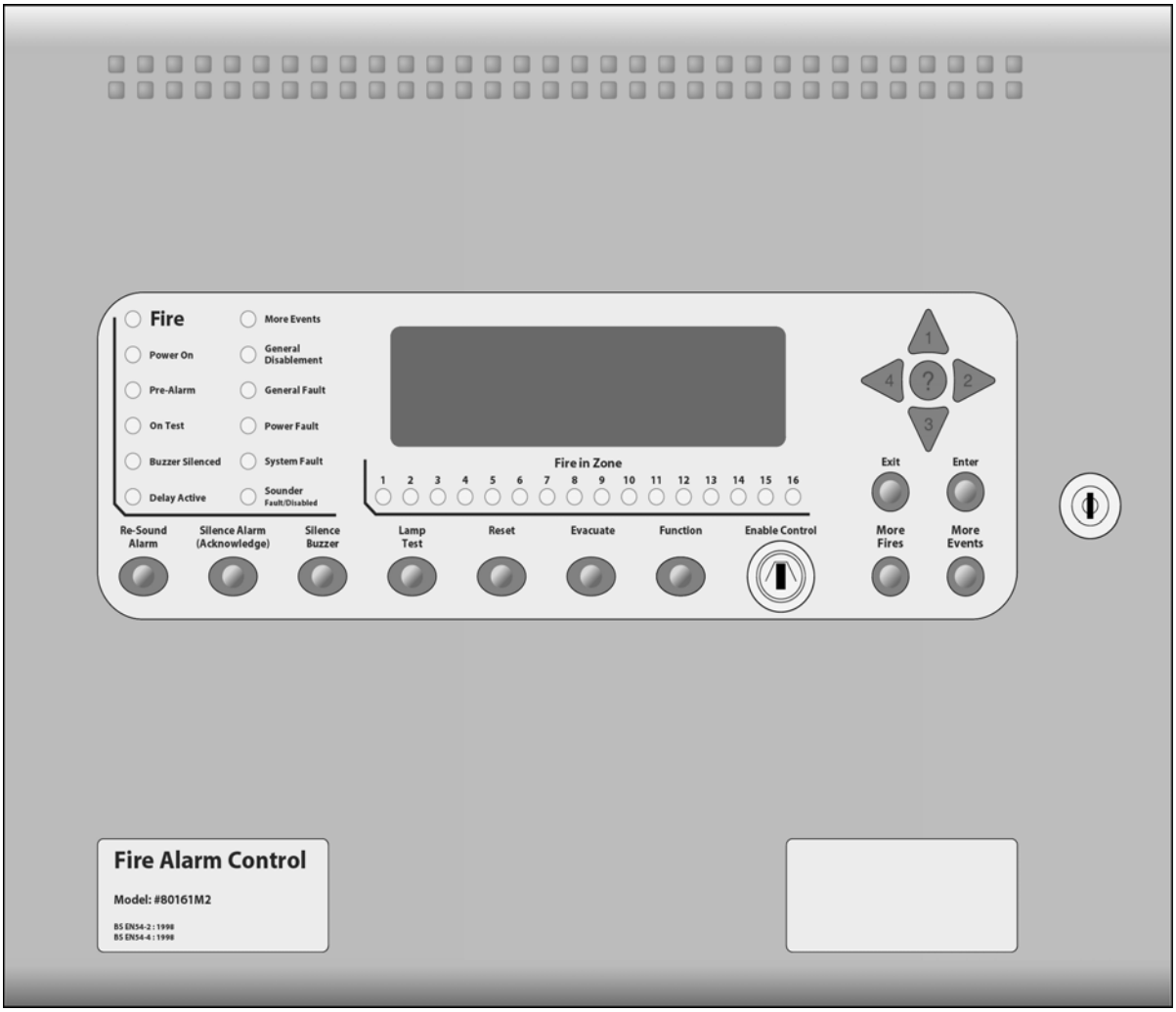

Fig 1 – Syncro ASM Front Panel

Lamp Test
Press this button to illuminate all front panel indicators and validate correct operation.

Silence Buzzer
This button will silence the internal buzzer, and will illuminate the Buzzer Silenced panel indicator. No other sounder outputs will be affected by this button operation.

More Fires
This button is used to view suppressed fire events. In the case of multiple fire activations, or when fire activation information has been temporarily suppressed for menu navigation, the fire events can be quickly restored and viewed by pressing this button.

More Events
This button is used to view all other suppressed events. In the case of multiple panel events or when any event information has been temporarily suppressed for menu navigation, this button is used to display the view events list.

Menu Navigation (up / down / left / right / enter / exit)
These are used to enter the password for access level 2 and are also used to navigate the Access 2 Facilities Menu.

Help (?)
This button offers additional information relating to the current status of the control panel. e.g. if the panel is in an alarm or fault condition then advice on the recommended action will be displayed or if a menu function is being accessed then help relating to that function will be displayed.

3.2 Access Level 2

Access level 2 can be reached by operating the Enable control keyswitch (where fitted) or by pressing any of the menu navigation (1, 2, 3 or 4) buttons. Pressing a menu button will then request the user to enter the correct Access level 2 password (a 4 digit number) followed by the Enter button.

The factory default password for Access level 2 is 2222.

The Access level 2 password can be changed at commissioning to meet customer's requirements. Enter the Access level 2 password in the space below for future reference.

Access level 2 will be required by the end user to acknowledge alarms and reset the system.

Any persons responsible for the fire alarm system should be aware of the Access level 2 password to enable the panel controls.

Without this password it will not be possible to acknowledge alarms or reset the system so it is most important that the responsible person knows the password.

ACCESS 2 PASSWORD .....

Silence Alarm / Acknowledge

This button is normally used to mute any fire warning sounders fitted to the Syncro ASM panel. These sounders are installed throughout the protected premises and are used to evacuate the premises.

In some cases, the fire warning sounders may be delayed; to allow a search time before building evacuation commences. In this case, the "Delay Active" panel indicator will be illuminated. If the Acknowledge Alarm button is pressed during the Delay Active period, the sounders may either be permanently muted or the delay may be extended to the second stage delay time. This will depend upon the panel configuration and cannot be amended by the end user.

If there is a second fire activation during an Active Delay, then all delays are cancelled and outputs will operate in accordance with the building fire strategy.

Re-sound Alarm

If any fire warning sounders have been muted using the Acknowledge Alarm button, then pressing the Re-sound Alarm will re-energise all muted sounders.

Reset

This button is used to reset any activation that is defined as a latching input type. These will include fire and pre-alarm events. In general, fault events are non-latching and cannot be cleared by operation of the Reset button. These events will clear when the fault input is cleared.

Function button

This button is a software programmable input that may be used to perform customer-defined actions. The default operation of these buttons is to perform no action (transparent input).

The operation of these buttons should be entered in the box below;

Function button .....
.....

Evacuate button

Operation on the Evacuate button will cause all sounders on the system that are configured to respond to an evacuate command (default) to sound continuously. The Evacuate button may be re-configured to sound the abandon ship warning, 7 short bursts on the sounders followed by one long burst.

4. Panel Operation

4.1 Fire Event

In the event of a fire, the red FIRE lamp and the appropriate Fire Zone indicator will flash. Details of the fire activation (address and location text) will be given in the LCD Status display.

The fire warning sounders will sound throughout the vessel and the panel fire contact, alarm contact and fire routing outputs will be energised.

The panel buzzer will be pulsing, but can be silenced by pressing the **Silence Buzzer** button.

To silence the fire warning sounders, press any of the menu navigation buttons and enter the Access 2 password (given in section 3.2) then press the Enter button.

The panel controls will now be enabled and will remain enabled for about 1 minute after the last key has been pressed.

Pressing the **Silence Alarm / Acknowledge** button will now silence the sounders. The sounders can be started again if required by pressing the **Re-Sound Alarm** button

The system can be reset by pressing the **Reset** button.

If there are more than two zones in fire on the system then these may be viewed in the text display by pressing the **More Fires** button.

4.2 Fault Event

If there is a fault on the system, the yellow **General Fault** indicator will be flashing and there may be other fault LED indications which identify the nature of the fault.
The Fault Contact will be energised and the panel buzzer will be sounding continuously.

Details of the fault will be described in the text display.

The panel buzzer can be silenced at any time by pressing the **Silence Buzzer** button.

If there are more than two fault events on the system then these may be viewed in the text display by pressing the **More Events** button.

4.3 Pre-alarm event

Sensors or inputs can generate a pre-alarm. A pre-alarm is used to warn of a slow change in the analogue level from detection devices, typically due to a smouldering fire. When a pre-alarm is generated, the control panel will illuminate the pre-alarm LED and will sound the internal buzzer continuously. The address and location of the source of the pre-alarm will be indicated in the LCD status display.

The source of the pre-alarm input should be investigated.

The panel buzzer can be silenced at any time by pressing the **Silence Buzzer** button.

If there are more than two fault events on the system then these may be viewed in the text display by pressing the **More Events** button.

4.4 Evacuate event

An input on the system can be configured to create an Evacuate or abandon ship event. Operation of an evacuation input or the Evacuate button will cause the red FIRE lamp to illuminate and all sounder devices to be operated continuously or if configured as an abandon ship signal, the abandon ship signal to be sounded.

The panel buzzer will sound continuously and the source of the evacuation event will be shown in the LCD status display.

The panel buzzer can be silenced at any time by pressing the **Silence Buzzer** button.

To silence the fire warning or abandon ship sounders, press any of the menu navigation buttons and enter the Access 2 password (given in section 3.2) then press the Enter button.

The panel controls will now be enabled and will remain enabled for about 1 minute after the last key has been pressed.

Pressing the **Acknowledge Alarm** button will now silence the sounders

If the source of the event is a latching input, then pressing the **Reset** button will reset the system.

4.5 Alert event

An input on the system can be configured to create an Alert event. Operation of an Alert input will cause all sounder devices to be pulsed on a 1 second cycle.

The panel buzzer will sound continuously and the source of the alert event will be shown in the LCD status display.

The panel buzzer can be silenced at any time by pressing the **Silence Buzzer** button.

To silence the fire warning sounders, press any of the menu navigation buttons and enter the Access 2 password (given in section 3.2) then press the Enter button.

The panel controls will now be enabled and will remain enabled for about 1 minute after the last key has been pressed.

Pressing the **Acknowledge Alarm** button will now silence the sounders

If the source of the event is a latching input, then pressing the **Reset** button will reset the system.

5. Access 2 Menu

There are a number of menu options available at access level 2. To view this menu, press the **Right (2)** pointing arrow key and enter the Access 2 password (given in section 3.2) then press the **Enter** button or operate the Enable controls keyswitch if fitted.

The panel controls will now be enabled and will remain enabled for about 120 seconds after the last key has been pressed.
When in Access 2, press any of the four navigation buttons to view the Access 2 menu.

To navigate the menu, use the **Up (1)** and **Down (3)** buttons to move the cursor to the required menu option. Use the **Right (2)** button to select the highlighted menu option. Use the **Left (4)** button to exit back to the main menu. Use the **Enter** button to input the required information and the **Exit** button to cancel any data selection. Pressing the **Help (?)** button will display the help screen appropriate to the current menu selection.

ACCESS LEVEL 2
Disablements
View devices
Test Zones
Set system time
Contamination Status
Access level 3

Main menu items available at access levels 2:

5.1 Disablements

Any disablements made using this menu will remain active until the disablement is cleared by manual intervention at the panel.

Disable Immediate Output Response
If any outputs are configured to be delayed (an Access Level 3 configuration operation), then EN54 requires that these outputs are not delayed, unless set to do so at Access Level 2. This menu option allows delays to outputs to be activated, by disabling the immediate response facility.

Disable Zones
All detection devices, including manual call points, are disabled in the selected zone.

Disable Addresses
Any loop device can be disabled using this menu option. In devices with more than one input or output, then each sub-address may be individually disabled.

Disable Sounders
This menu option is used to disable all sounder outputs fitted to the control panel. A sounder output is defined as any output that has been set to respond to the Silence and Evacuate panel commands. Sounder outputs may be directly wired to the control panel (Sounder circuits 1 and 2) or loop driven devices.

The Sounder Fault / Disabled LED indicator will be illuminated, as well as the General Disablement Indicator.

Disable Panel Outputs
This menu option allows the following panel outputs to be independently disabled;

- Fire Contact
- Alarm Contact
- Fault Contact

When the Fire Routing output is disabled, the front panel Fire Routing Fault / Disabled indicator and General Disablement indicator will be permanently illuminated.

View / Restore Disablements
To cancel any disablements, there are two options. The first is to scroll through each individual menu option, then toggle any disablements to the normal condition. The second, preferred option, is to use the View / Restore Disablements option. This menu option will allow the user to scroll through all active disablements and individually enable each disablement by pressing the **Enter** button.

5.2 View Devices
This menu option permits the user to view all addresses connected to the detection circuit. For each address & sub-address, the LCD status display will give the device type, zone and location text. In addition, analogue devices will give an indication of the analogue value of the current device.
For digital input devices (Manual call points, switch monitor units etc) the input state is given, either as Normal or Activated. For output devices, the output state will be shown as either Normal, Intermittent of Continuous.

This menu is used by experienced personnel to investigate the current status of the system and may help in fault finding techniques.

5.3 Test Zones

Test Zones
Each zone may be individually put in to a Test Mode condition. When test mode is selected, the devices in the zone may be tested and the Syncro ASM panel will automatically reset after 3 seconds. This is used for one man testing of the fire system.

When a zone is put in to test mode, the user is prompted to select the sounder response behaviour for the selected zone. When set to the ON position, all sounder outputs will sound for the duration of the fire event. The sounders will be muted when the panel automatically resets.

NOTE: On systems with a high number of Loop powered sounders fitted, all sounders may not be able to activate within the 3 second fire period and therefore loop sounder confirmation may be intermittent.

View & Restore Zones in Test
To cancel any zones in test, there are two options. The first is to scroll through each zone in the Test Zone menu, then toggle any active zones to the normal condition. The second is to use the View / Restore Zones in Test option. This menu option will allow the user to scroll through all active zones in test and individually enable each disablement by pressing the **Enter** button.

5.4 Set System Time
This menu option is used to set the panel date and time. This is necessary so that any events are accurately logged in the event log and on the panel printer (if fitted). The panel automatically compensates for daylight saving time.

5.5 Contamination Status

Any detection devices that exceed 85% of the limit for the manufacturers working range during the daily calibration sequence are added to a contaminated device menu. At this stage, the panel will not notify the user of a fault for the contaminated devices.
This menu option allows the user to see any devices approaching their maintenance fault limits and to prevent unnecessary faults being reported from dirty detection devices.

This menu is typically used as a preventative maintenance feature.

5.6 Access Level 3

This menu option is used to enter the access 3 password for the engineering function menu.
Details of the options available at Access level 3 can be found in the Syncro ASM Product manual.

6. Routine Maintenance

Syncro ASM control panels do not require any specific maintenance but should the control panel become dirty it can be wiped over with a barely damp cloth. Detergents or solvents should not be used to clean the panel and care must be taken that water does not enter the enclosure.

The control panel contains sealed lead acid batteries to provide standby power in the event of mains failure. These batteries have a life expectancy of around 4 years. It is recommended that these batteries be annually tested in accordance with the battery manufacturer's recommendations to determine their suitability for continued standby applications.

Routine testing of the fire alarm system will identify any malfunction of the control panel and any malfunction should be reported to the fire alarm maintenance company immediately.

Detection devices are automatically calibrated on a daily basis and any devices that fail the detector manufacturer requirements will be notified as a maintenance fault. The contamination status menu is also useful in determining detection devices that are approaching their working range limits (see 5.5 above).